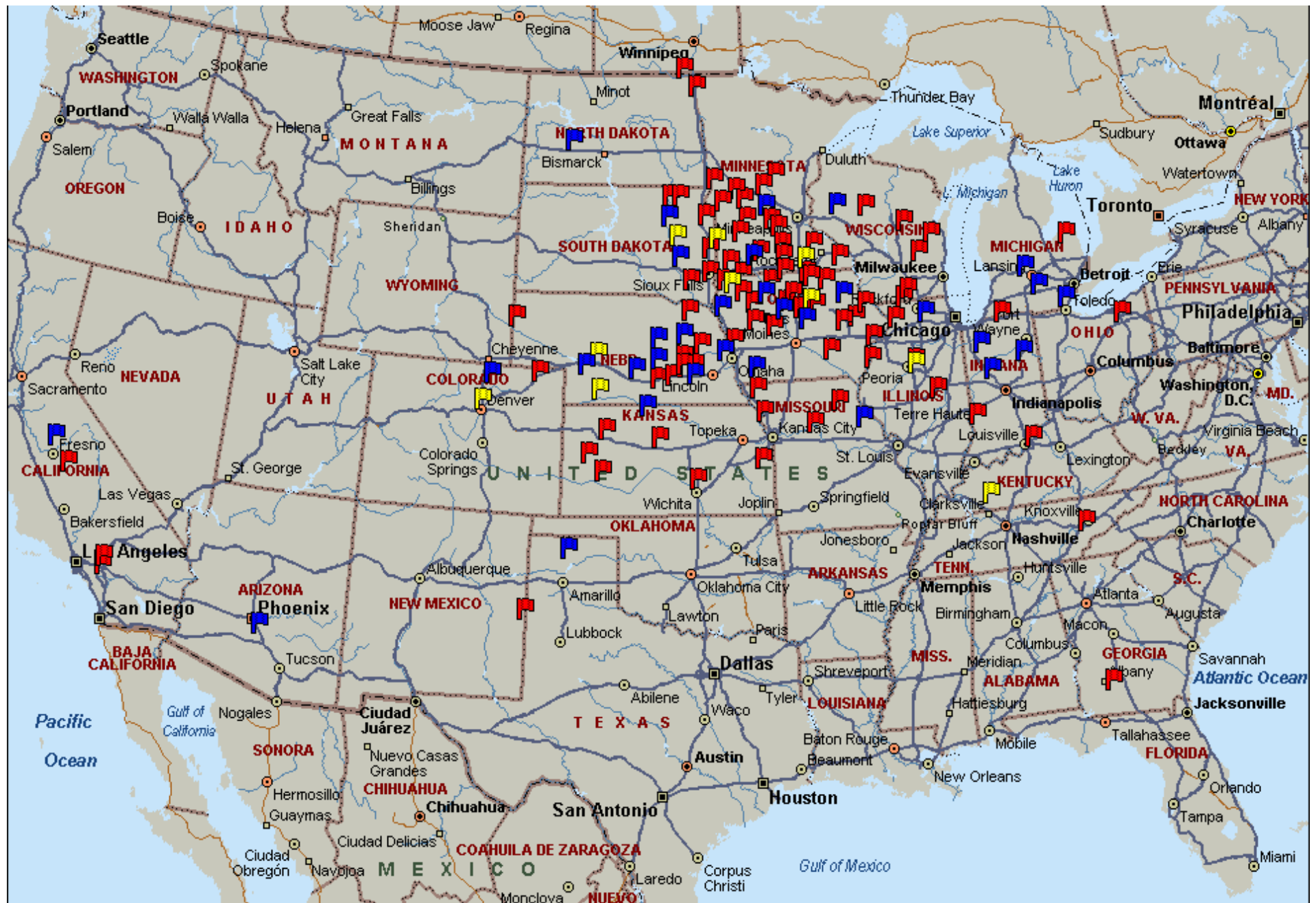


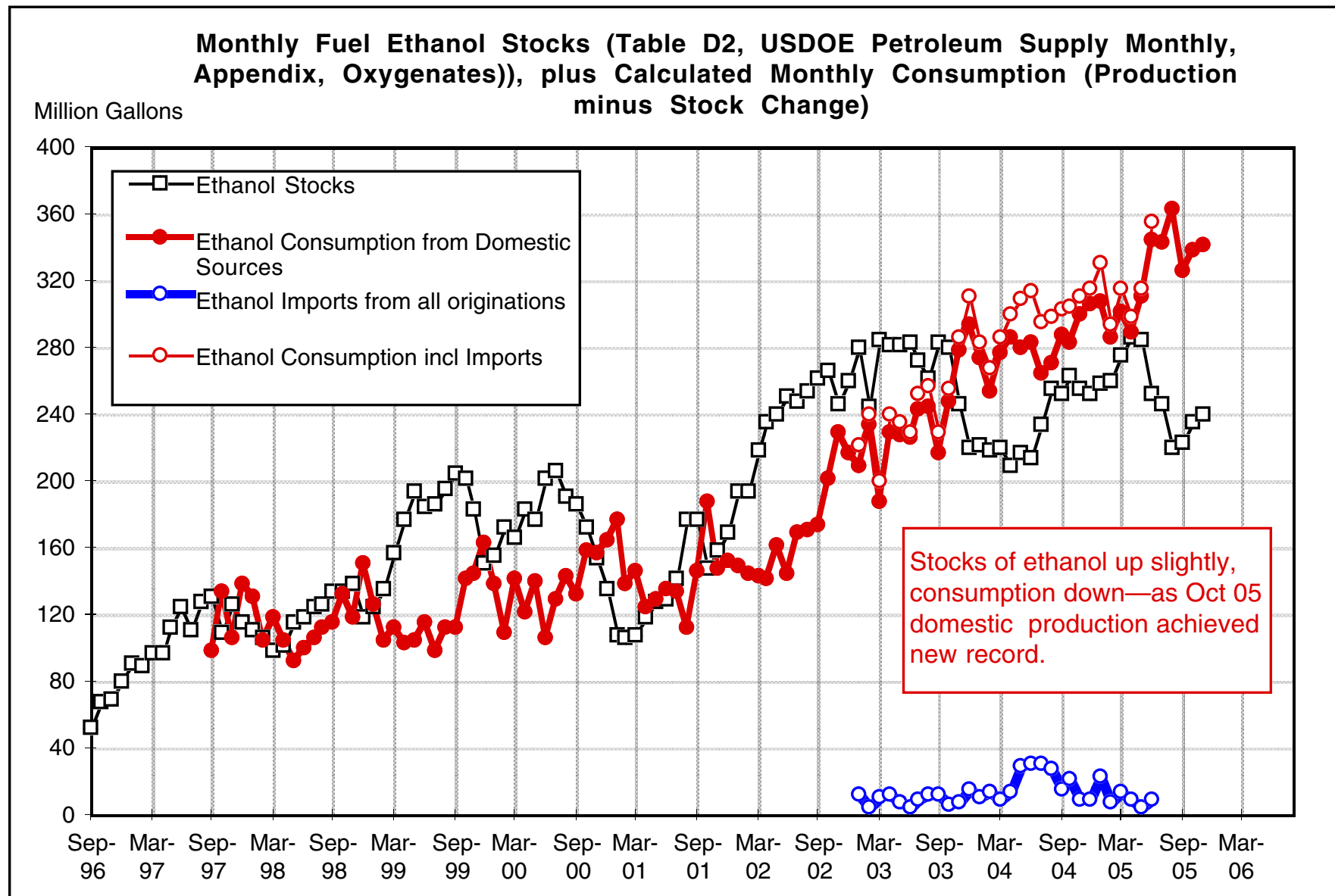
Ethanol and Biodiesel in Kansas

**USDA Rural Development Renewable
Energy and Energy Efficiency Program
Conference**

March 30, 2006

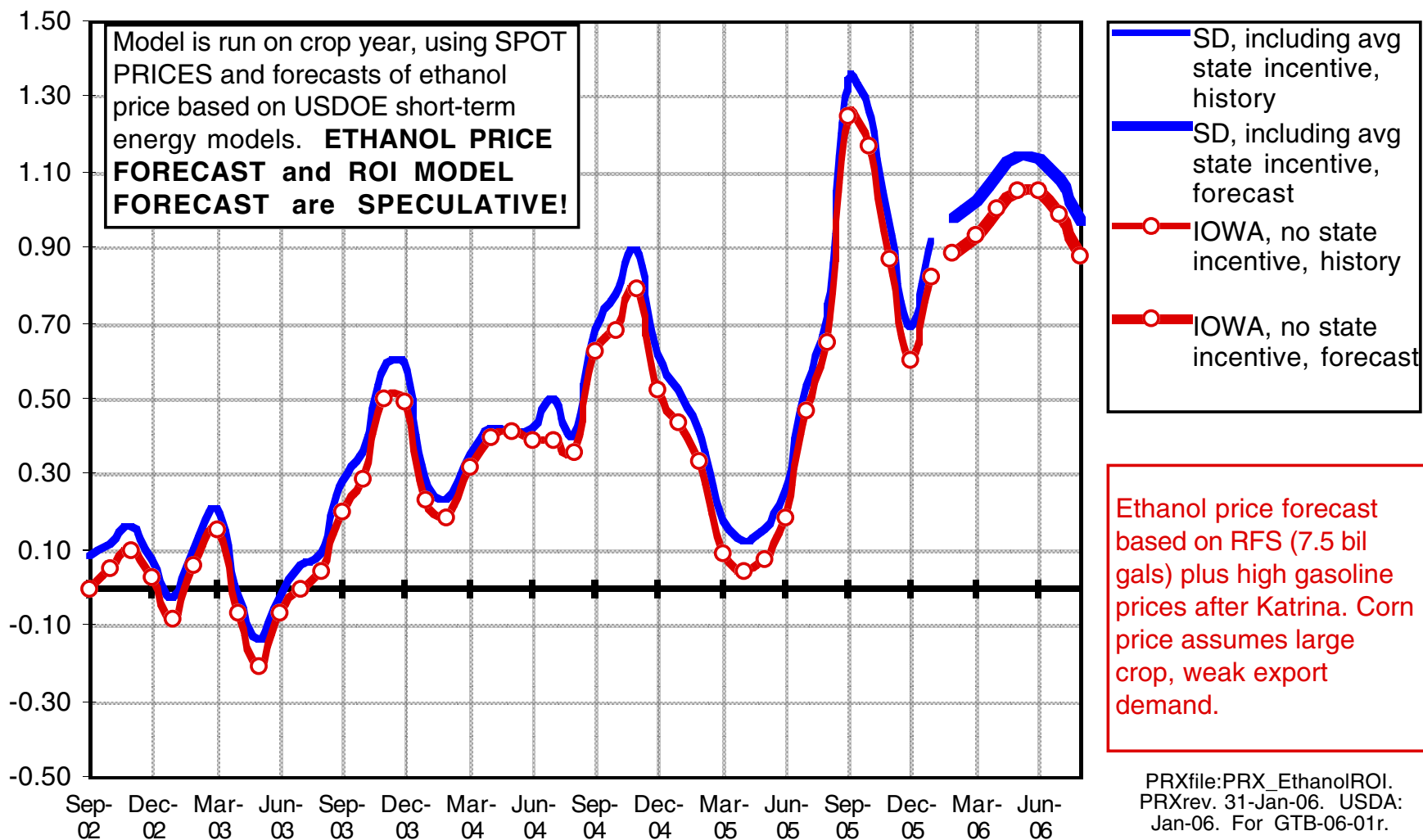
Hesston, Kansas





MODEL ETHANOL PLANT RETURNS (BASED ON SPOT ETHANOL PRICES)

Based on Ethanol Price, Corn Price, DDG Price, and Natural Gas Price forecast on previous pages,
Dollars per gallon and on PRX "typical plant" cost analysis.



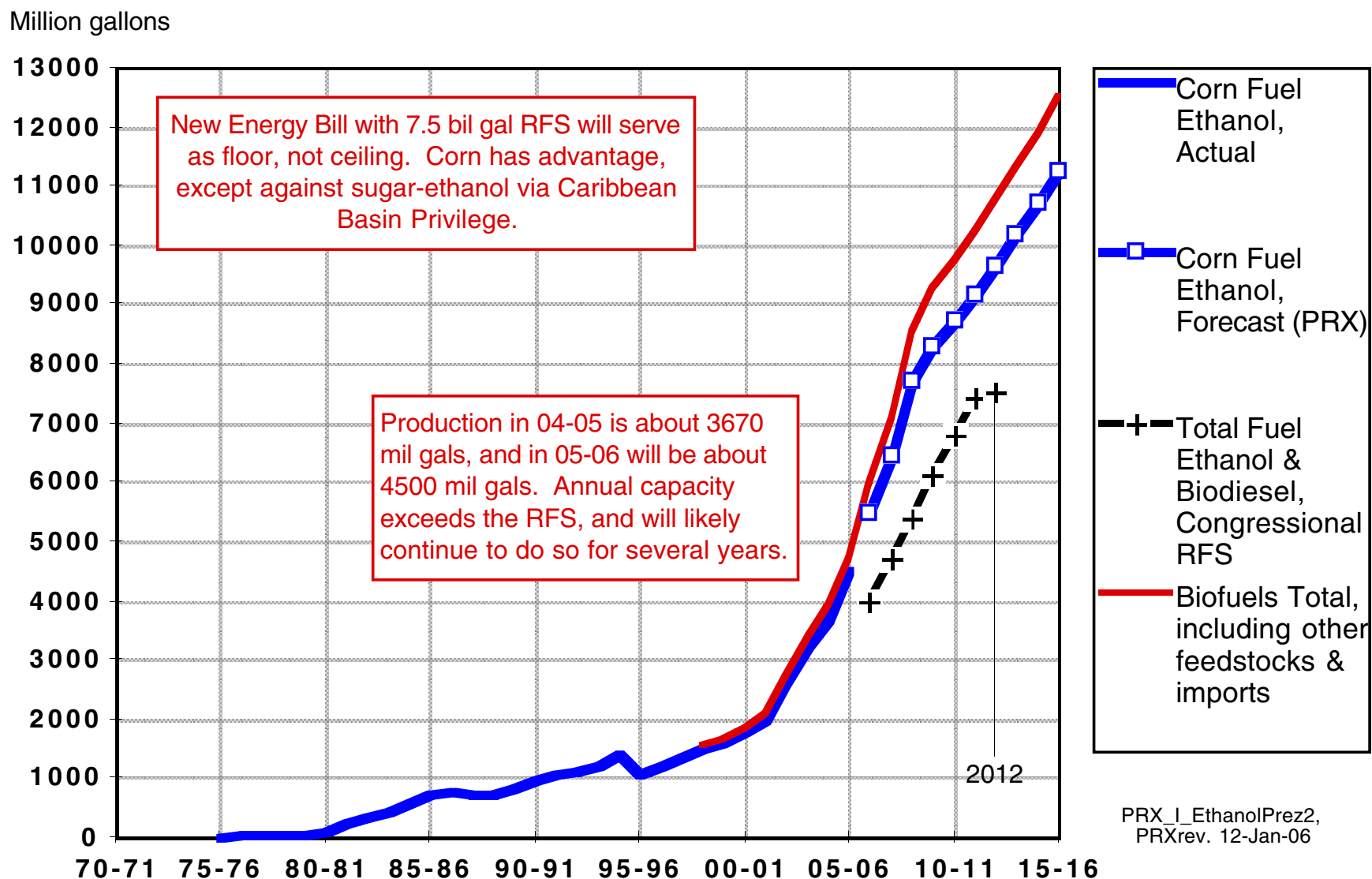
Construction History

Production/mm gallons	Current	Build	Plants
•March 2002	2389	344	11
•March 2003	2706	463	13
•March 2004	3162	442	11
•March 2005	3738	669	15
•March 2006	4481	2005	42

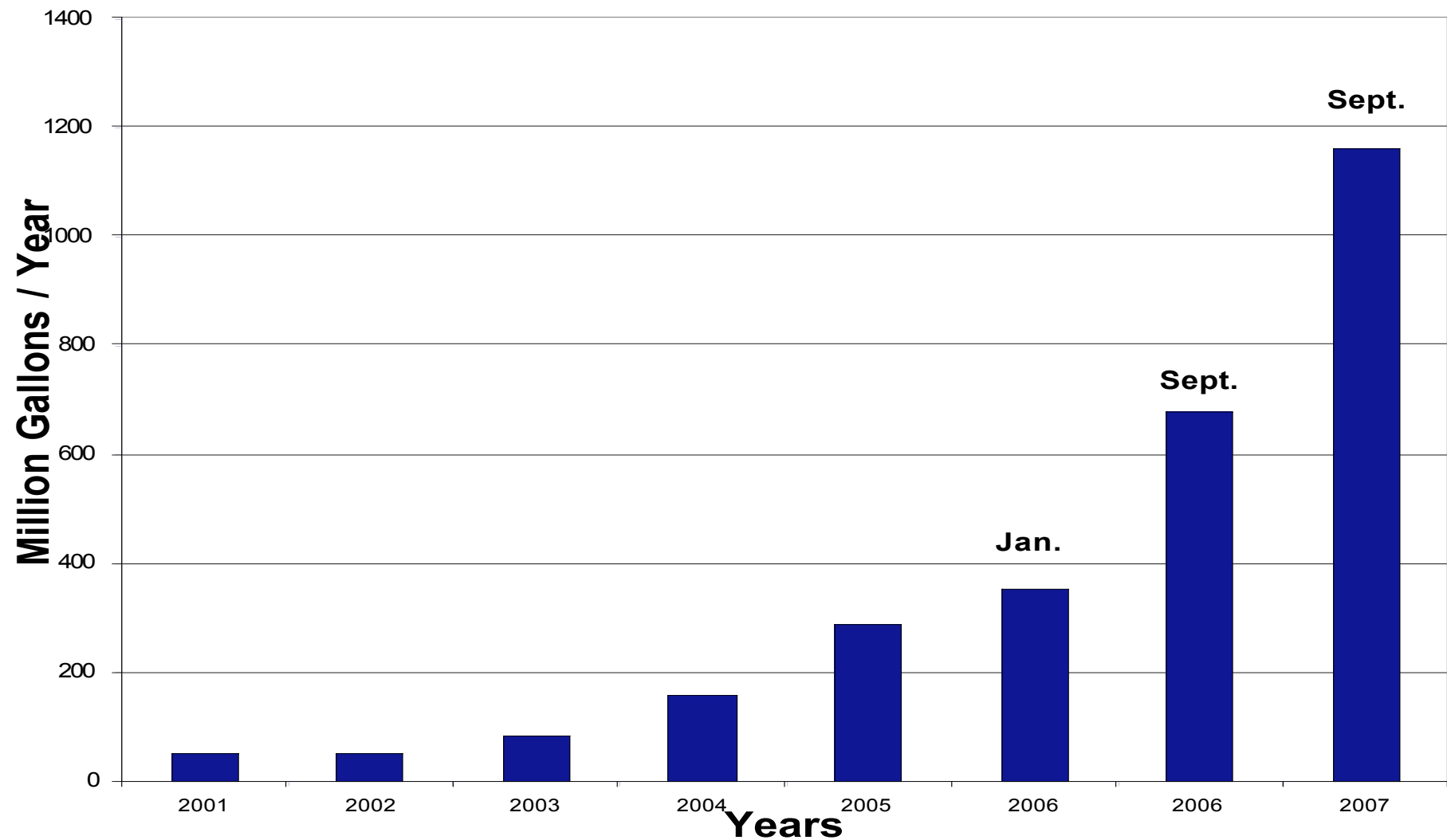
Current Production

- 4448 mmg of ethanol capacity.
- Less than 50 mmg from other feedstocks.
- 33 new plants under construction.
- 1900 mmg under construction.
- 9 plants in expansion.
- 168 mmg in expansion.

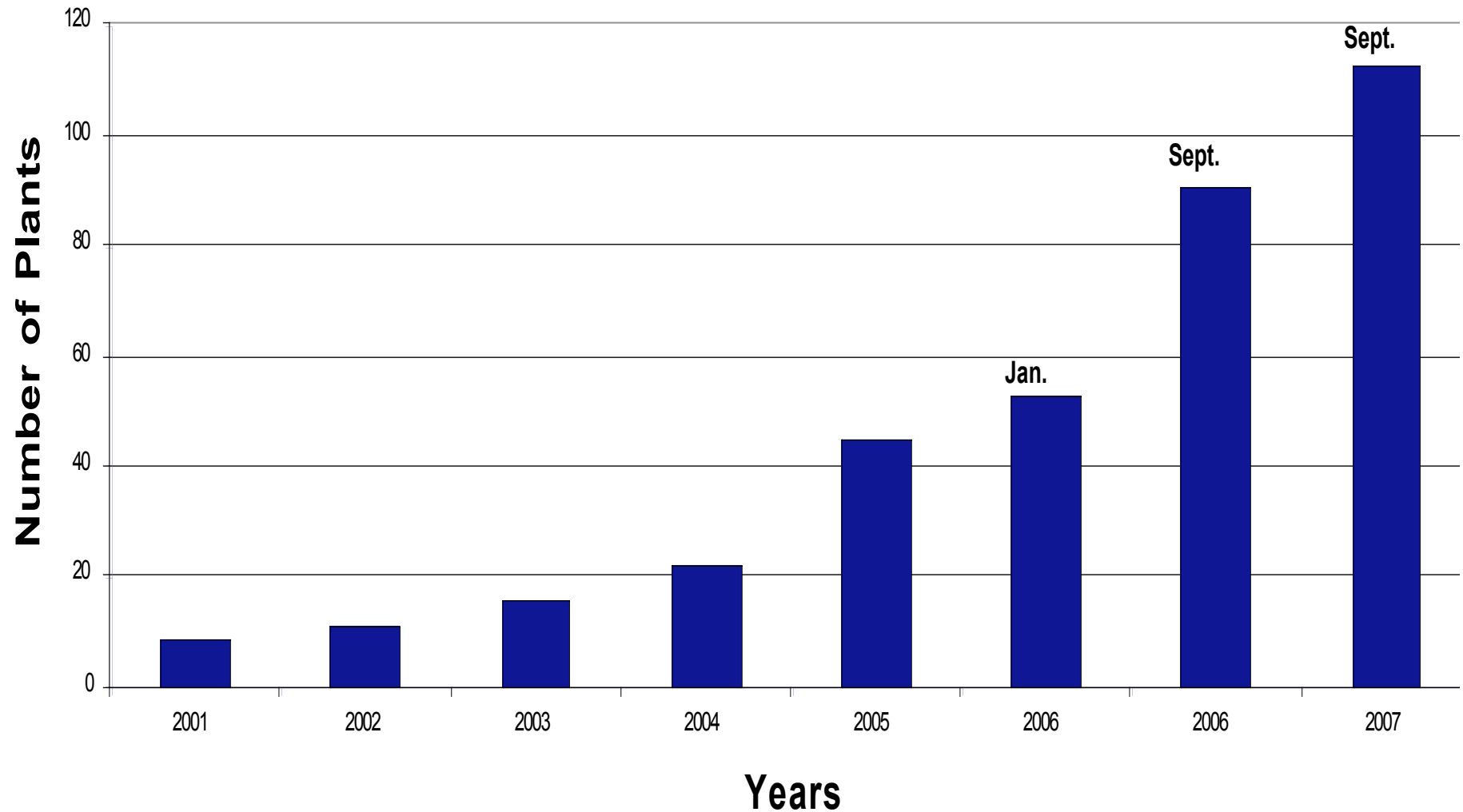
US FUEL ETHANOL PRODUCTION, HISTORY & FORECAST



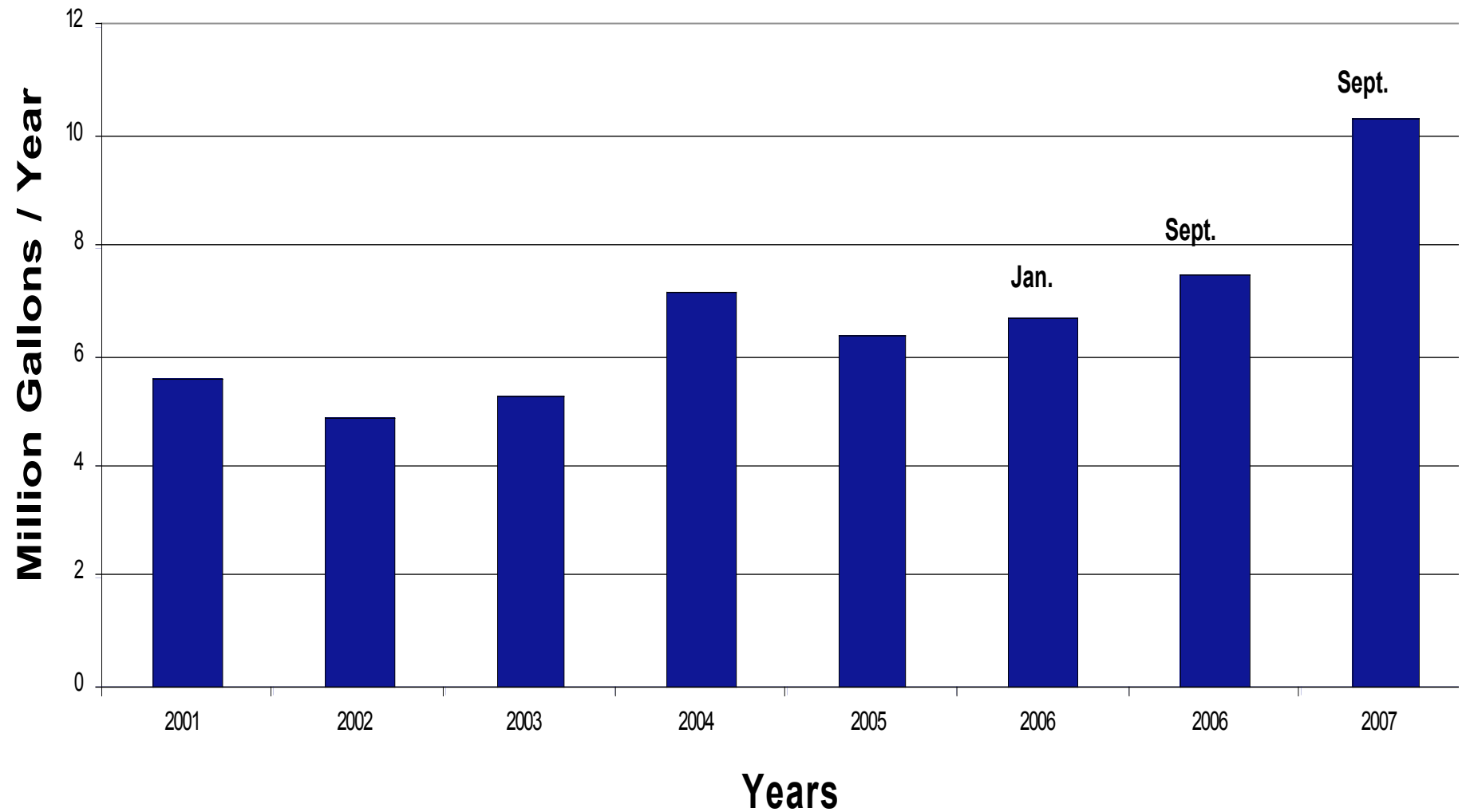
Biodiesel Production Capacity 2001-2007 Estimate



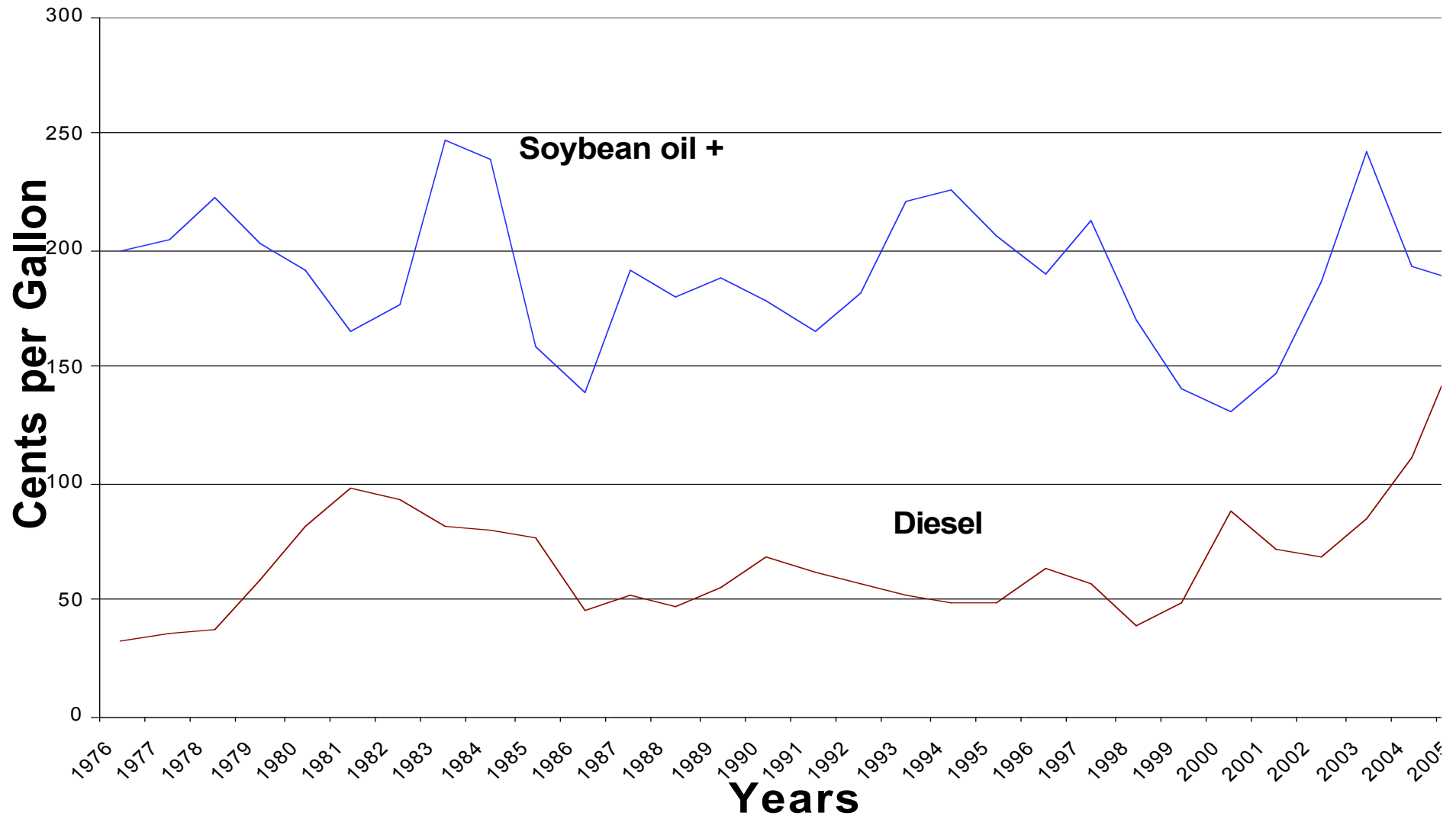
Number of Biodiesel Plants 2001-2007 Estimate



Average Size of Biodiesel Plants 2001-2007 Estimate

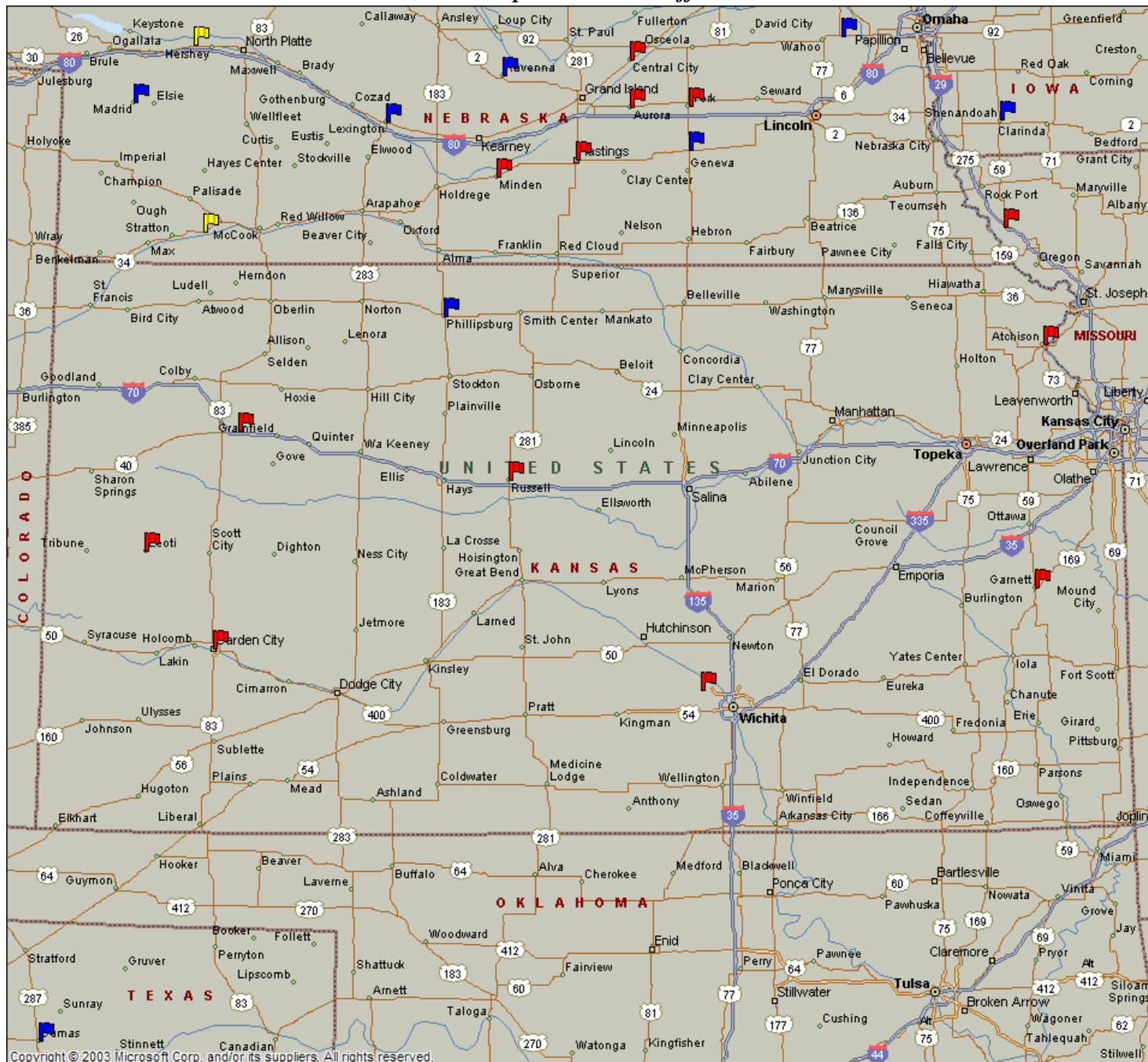


Price of Wholesale Diesel and Soybean Oil + \$0.30 per Gallon Processing Charge



Biodiesel Profitability Conditions

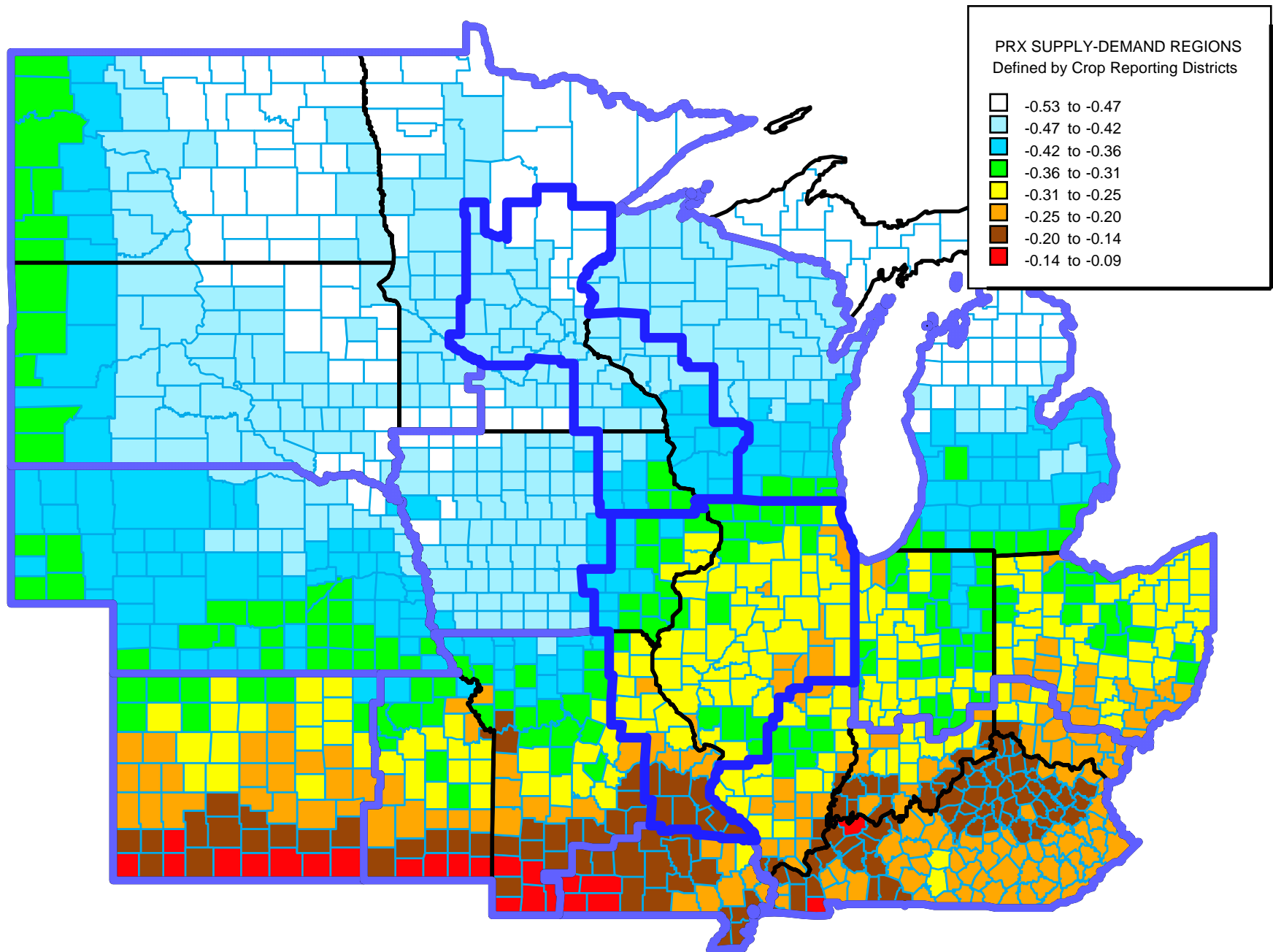
- Price of diesel at historically high levels
- S.B. oil prices at lows of 30 year range
- Gov't. incentives & mandates permanent
- Increase processing efficiencies
- Feedstocks with lower prices
- Biodiesel as premium product with a premium price

A ProExporter Network Affiliate

HCSLLC

Holbrook Consulting Services LLC

A ProExporter Network Affiliate



Type and Size of Plants

- Typical – natural gas powered 50 to 100 mmgpy
- Kansas plants somewhat smaller
- 40 mmgpy considered minimum size
- Smaller sized plants need mitigating factors

Ethanol Plant Scale

- 40 mm gallon to 50 or mm gallon standard.
 - 100 mm gallon offer economies of scale.
 - NW Iowa plant at 50 mm gallon ROE of 20%.
 - Same plant at 100 mm gallons ROE of 30% +.
-
- Based on 10 year corn price history.
 - Based on 50% equity.

Plant Locations

- Access to adequate feedstock (corn/milo)
- Access to energy and water
- Transportation infrastructure
 - Inbound
 - Outbound
- Markets

Good Project Keys

- Focused, energetic champion(s)
- Community support
- Willingness to compare and evaluate sites
- Ethanol business development focus
- Teaming up with good business partners
 - Builder
 - Banker
 - Marketer(s)

Project Requirements

- Traditionally – 45% equity, adjusted based on risk assessment
- Local versus outside equity
- Industry knowledge – “Talk to people in the business”
- Evaluate project based on financial measures